

Appl. No. 09/848,002
Amdt. dated February 7, 2006
Reply to Office Action of May 10, 2004

Remarks

The present amendment responds to the Official Action dated October 7, 2005. The Official Action objected to the previous amendment under 35 U.S.C. 132(a) as introducing new matter. The disclosure was objected to as failing to cite related applications appropriately. Claims 3, 4, 9 and 10 were objected to as informal. Claims 13-20 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Claims 1-20 were rejected under 35 U.S.C. 112, second paragraph as being indefinite. Claims 1-3, 6-9, 12, 13, 16, 19 and 20 were rejected under U.S.C. 103(a) based on Walker et al. U.S. Patent No. 6,567,787 (Walker). Claims 4, 5, 10, 11, 14, 15, 17, and 18 were rejected under 35 U.S.C. 103(a) based on Walker in view of Green International Publication WO 97/13229 (Green). Claims 13-18 were rejected on the grounds of obviousness type double patenting. These grounds of rejection are addressed below following a brief discussion of the present invention to provide context.

Claims 1, 3, 4, 6, 7, 9, 16 and 20 have been amended to be more clear and distinct. In particular, these claims have been amended to address objections by the Examiner as to clarity, and to further clarify that different retail performance metrics correspond to multiple different types of events occurring in a single transaction. New claim 21 has been added by amendment. Claims 1-20 are presently pending.

Appl. No. 09/848,002
Amdt. dated February 7, 2006
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The Present Invention

Among its several aspects, the present invention provides methods and apparatus for tracking individual retail performance metrics occurring within a single transaction at a point of sale terminal. A particular retail performance metric (RPM), for example, the time a system waits for or spends scanning a product, weighing a product, keying input to the POS terminal, or the like, is recorded. The particular RPM is determined based on the type of input received by the system, depending on whether the input received is related to scanning a product, weighing a product, keying input to the POS terminal, or the like. An RPM record, including the time and type of input received, is stored in a transaction log associated with an individual transaction entry and/or time type category. For each input received during a transaction, a separate RPM record is stored in the transaction log allowing multiple and different RPMs to be tracked within the transaction.

By way of example, an overall transaction in accordance with the present invention may include several different operations performed by a cashier who services a customer purchasing multiple items at a POS station. For example, some items may have attached bar codes for scanning by the POS station while other items, such as produce items, may require weighing by the POS station. Produce or items with defective bar codes may require the cashier to key in certain data. Each of the scanning events, weighing events, and keying events would result in separate RPM records being recorded in a transaction log and associated with a record defining the transaction. The tracking of these RPM records results in decomposing the overall transaction into subtasks of a finer level of detail. This finer level of detail advantageously helps

Appl. No. 09/848,002
Amdt. dated February 7, 2006
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identify deficiencies and potential problems at the POS station. For example, a record of a series of scans requiring an inordinate amount of time may indicate a scanner which needs cleaning or repair whereas, in conventional systems, an increase in overall transaction time would merely indicate a problem without indicating the specific area of a problem. Further, in conventional systems, a particularly efficient cashier might achieve an overall transaction time that hid a particular problem by being more efficient than average on a number of subtasks.

In one aspect, the present invention relates to a computer implemented method of tracking a plurality of retail performance metric records for different types of events within a transaction and recording a transaction entry record. The method receive inputs for a plurality of different types of events occurring at a point of sale (POS) station during a transaction, wherein the types of events occurring at the POS station comprise scan operations, weighing operations, key operations, or tender operations. The method further records retail performance metric records for the plurality of different types of events, each retail performance metric record associating an event type and a time related to performance of the event. Moreover, the method associates the retail performance metric records with a transaction entry record and records the transaction entry record indicative of the transaction. The transaction entry record associates multiple retail performance metrics for at least two different types of events occurring within the transaction.

Section 132(a) Objection and Section 112, First Paragraph

This objection and rejection is traversed. The time type categories of claims 13-20 are clearly set forth at page 22, lines 13-16, for example. Reconsideration and withdrawal of this objection and rejection are requested.

Appl. No. 09/848,002
Amdt. dated February 7, 2006
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Objection to the Specification

Clarification or withdrawal of this objection are requested. Reviewing the present application, it does not cite related applications.

Proper Content of an Abstract

The Examiner has not made a specific objection to the Abstract. It will be gladly revised if the Examiner will clarify the nature of any objection.

Claim Objections

The Examiner is thanked for her careful reading of the claims. The Examiner's suggestions regarding claims 3, 4 and 6 have been adopted by the present amendment. Claim 9 has been amended to read "an entry identifier value" at line 3 and "the entry identifier value" in line 4 so that the language used in claim 9 is consistent with that found in claim 3, for example.

Section 112, Second Paragraph, Rejections

The claim 1 rejections should be reconsidered and withdrawn in light of the present amendment and the remarks which follow below. As an initial matter, the preamble of claim 1 recited that the claim addresses a "computer-implemented method of tracking a plurality of retail performance records for different types of events within a transaction and recording a transaction entry record". This preamble establishes the context of the invention covered by claim 1, but all elements of claim 1 find their antecedent basis in the body of the claim and not in the preamble.

Taking the embodiment of Fig. 4 described at page 21, line 16-page 24, line 18, for example, a transaction entry record is built up from a plurality of retail performance metric records as follows. At step 402, terminal 106 begins waiting for input from either keyboard 114

Appl. No. 09/848,002
Amdt. dated February 7, 2006
Reply to Office Action of May 10, 2004

or bar code scanner 112, for example. The POS terminal 106 records the start time. When the clerk scans a product or keys in a product's barcode using the keyboard, the POS terminal records the stop time. The terminal determines the type of event and the elapsed time of the event. The elapsed time and type are stored as a retail performance metric (RPM). Figs. 3a and 3d show examples. A new start time is recorded and the system waits for the next input.

Two examples are described at page 23, lines 5-21 and page 24, lines 1-12, respectively. The invention provides an improved level of data granularity which has a wide variety of advantages as discussed at length at page 25, line 3-page 28, line 21, for example.

Paragraph 7a

Turning to the specific subparagraphs of paragraph 7 of the Official Action, the word "multiple" has been deleted. The antecedents for the "retail performance metrics" as amended are found in the preceding two elements of "recording" and "associating".

Paragraph 7b

"The transaction" has antecedent basis in line 5 of claim 1. As stated in the first element of the claim, "a plurality of different types of events" occurs "during a transaction". The "transaction entry record" includes "the retail performance metric records" for this "plurality of different types of events". The claims as amended are not confusing when considered as a whole. A chance to discuss the claims by telephone with the Examiner is requested if these rejections are maintained.

Appl. No. 09/848,002
Amdt. dated February 7, 2006
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Paragraph 7c

The present amendment makes clear that retail performance metrics for at least two different types of events are found in the transaction entry record. Reconsideration of this objection is requested in light of the present amendments.

Paragraph 7d

As previously amended, claim 1, line 16 reads "associating the retail performance records", the same records recorded for the "plurality of different events" in the preceding element. There was and is no lack of clarity.

Paragraphs 7e-7h

These objections are addressed by the similar amendments made to claim 7 and the analysis above with respect to paragraphs 7a through 7d.

The Art Rejections

The art rejections are again traversed on the grounds raised previously. The claims now require that retail performance metric records for at least scan operations and by operations are associated in a transaction entry record. Walker neither anticipates nor makes obvious the present claims. The Examiner appears to have disregarded the Applicants' earlier arguments based on construing the previous language as open-ended. Please reconsider those earlier arguments in light of this amendment.

Double Patenting

While Applicants do not acquiesce in this rejection, a terminal disclaimer is submitted herewith.